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TITLE : METHOD OF HOT FINISH ROLLING  
FOR Mg-Al ALLOY



**ABSTRACT :** PROBLEM TO BE SOLVED: To solve the conventional problem that the crystal grains of an Mg-Al alloy for press forming, e.g. AZ31 by ASTM specification, are as large as about 10-40  $\mu\text{m}$  and result in the hindrance of strength and workability and that, although a countermeasure is taken to refine a structure and improve strength by heating a rolled sheet up to a high temperature and applying press working to it and further by utilizing the stress and strain at pressing, a dense structure cannot be provided as a whole and satisfactory strength cannot be obtained.

**SOLUTION:** A rolled sheet of an Mg-Al alloy containing 1.5-4.5% Al is rolled by means of a plurality of passes at 180-260°C rolling temperature at 10-30%; draft per pass, and total draft is regulated to 40-60%. By this method, the structure of the rolled sheet can be refined to  $\leq 10 \mu\text{m}$  grain size, and LDR, elongation and strength can be remarkably improved.

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